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UNDERSTANDING THE ANTECEDENTS OF SCM PROCESS PERFORMANCE: THE PERSPECTIVE OF IT-ENABLED RESOURCES

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Abstract

This study aims to better understand how a firm's resources can be used to improve performance of supply chain. Extending prior research on the resources-based view, this study develops an integrated model, which delineates the relationship among three IT-related resources, absorptive capacity, and supply chain (SC) process performance. Through a field survey of 205 managers from Taiwan's firms, most proposed hypotheses are supported, showing that IT-related resources in terms of managerial skills and partner support affect absorptive capacity, which in turn influences performance. This paper offers a new perspective on using firms' resources from which their SC performance can be improved.

Key words: IT-related resources, supply chain, absorptive capacity, performance

1 INTRODUCTION

Although prior studies have identified the critical role of IT-enabled supply chain management (SCM) and knowledge management in achieving a firm's competitive advantage respectively (Dong et al. 2009, Malhotra et al. 2005) , they fail to consider how the process performance of supply chain can be improved from both the perspectives of leveraging IT-enabled resources and creating knowledge. Since process performance of a supply chain, referring to the degree to which a firm has gained improved business process, plays a key role in enhancing a competitive position, this study aims to better understand how to improve process performance of a supply chain. The rationale for considering the process performance from two perspectives is twofold. First, the use of IT has received significant attention in the supply chain context, showing that IT plays a key role in facilitating flows of material, information, and finance in a network consisting of customers, suppliers, manufacturers, and distributors (Dong et al. 2009, Lee 2002). Accordingly, literature has viewed SCM as "a digitally enabled inter-firm and intra-firm process capability" (Rai et al. 2006). The key feature of a digitized SCM is the shift from the connection of physical processes to information-based integration across upstream and downstream operations (Zhu et al. 2004). This in turn may influence the efficiency of a supply chain. Following prior work (Dong et al. 2009, Zhu and Kraemer 2005) and the resource-based view (RBV), IT-enabled resources are conceptualized as backend integration, managerial skills, and partner support. Backend integration refers to a firm's capability of linking Web applications with back-office databases and facilitating information sharing along the value chain (Zhu and Kraemer 2005). Partner support is defined as the extent to which supply chain partners have compatible information systems to support inter-firm process (Lee 2002). Finally, managerial skills refer to the ability to align IT with business strategy and manage transformation in processes and structures (Armstrong and Sambamurthy 1999).

Second, in addition to synthesizing the resources provided by digitally enabled supply chain, enhancing a firm's ability to gain competitive advantage may rely on strategic knowledge creation (Malhotra et al. 2005). Absorptive capacity has been recognized as a dynamic capability pertaining to knowledge creation (Zahra and George 2002). Absorptive capacity (AC) is defined as the firm's ability to value, assimilate, and apply new and existing knowledge (Cohen and Levinthal 1990). Studies show that absorptive capacity plays an important role in organizational performance, including the transfer of technological knowledge, and the development of new products (Park et al. 2007). While prior work has identified the role of absorptive capacity in creating knowledge such as knowledge acquisition and knowledge transformation, and in gaining competitive advantage (Zahra and George 2002), how absorptive capacity can leverage the resources provided by digitally enabled SCM remains an open issue.

The above considerations lead to the following research questions: (1) How will IT-enabled resources and absorptive capacity affect supply chain process performance? (2) Will resource synergy of IT-enabled supply chain affect absorptive capacity? (3) Will absorptive capacity mediate the relationship between resource synergy of IT-enabled supply chain and process performance?

2 THEORY

2.1 The RBV on supply chain integration

The RBV focuses on how technology creates value and attributes improvement in firm performance to valuable resources and resources bundles (Peteral 1993, Zhu and Kraemer 2005). From the RBV, one lens through which to look at IT value creation is "an individual role for IT in firm performance." The basic logic is that IT affects other resources or processes which in turn affect a firm's performance (Wade and Hulland 2004). Following this logic, this study examines the relationships among IT-enabled supply chain integration, absorptive capacity, and a firm's process performance.

The main purpose of process performance improvements through supply chain integration is to generate revenue and reduce cost (Mukhopadhyay and Kerre 2002). As suggested by the RBV, the above improvements stem from resource synergy along the supply chain. Following this logic, firms need to leverage resources provided by both inter-firm digital platform and intra-firm dynamic capabilities (e.g. absorptive capacity) so that real-time information sharing and coordination of allocated resources across the supply chain can be effectively achieved (Lee 2002, Malhotra et al. 2005).

2.1.1 Absorptive capacity in supply chain contexts

While the RBV suggests value creation through resource synergy, performance improvement in a supply chain can also be achieved by efficient coordination and strategic knowledge creation (Malhotra et al. 2005). This can be understood through the lens of transaction cost economics (TCE). Explicitly recognizing the costs of coordination among economic entities in markets, TCE suggests that a firm's central task is to coordinate transactions efficiently (Williamson 1985). Drawing on TCE, this study proposes that efficient coordination is affected by absorptive capacity, which in turn is influenced by the digitally enabled integration capability (Dong et al. 2009, Zahra and George 2002).

Following Zahra and George (2002), absorptive capacity can be categorized as potential AC and realized AC. Potential AC comprises knowledge acquisition and assimilation capabilities, and realized AC centers on knowledge transformation and exploitation. Both potential and realized AC refer to the organizational capabilities from which a firm's dynamic capability can be built (Malhotra et al. 2005, Winter 2000). It is important to distinguish between capabilities and dynamic capabilities in order to appreciate the merits of AC. A capacity is viewed as "a high level routine that, together with its implementing input flows, confers upon an organization's management of a set of decision options that produce significant outputs of a particular type" (Winter 2000). Dynamic capabilities, however, are geared for affecting organizational change; they are essentially strategic in nature, and, therefore, define the firm's path of evolution and development (Zahra and George 2002). Based on the above definitions, the organizational capabilities, in terms of potential AC and realized AC, play a key role in increasing a dynamic capability that influences the firm's ability to create and deploy the knowledge necessary to build other organizational capabilities, e.g. marketing and distribution in the contexts of supply chain. Thus, both potential and realized AC provide the firm a foundation on which to achieve a competitive advantage that yields superior performance.

3 THE CONCEPTUAL MODEL AND HYPOTHESIS DEVELOPMENT

3.1 The conceptual model

Based on the above theoretical lens, we develop a conceptual model as shown in Figure 1. Consistent with our research purpose, performance improvement is regarded as the dependent variable; key resources for the digitally enabled supply chain and absorptive capacity are identified as independent variables. The model relates three key resources to absorptive capacity, including potential AC and realized AC, which in turn affects performance improvement. Then, we seek to study how AC mediates the relationship between key resources of digitally enabled supply chain and performance improvement.

3.1.1 The dependent variable: performance improvement

According to SCM literature, specific variables are used as measurements of process performance. For example, increased sales (strategic benefits) and decreased procurement costs (operational benefits) are used by Mukhopadhyay and Kekre (2002). Subramani (2004) used a similar specification and examined overall cost efficiency in the operational benefits category. Rai et al. (2006) further included improved customer services in the strategic benefits category. Following Dong et al. (2009), a three-dimensional framework is used in this study—improvement in upstream

operations (reduced procurement costs, lower inventory costs, and improved coordination with suppliers), improvement in internal operations (increased internal process efficiencies and staff productivity), and improvement in downstream operations (increased sales, wider segments, and improved customer services).

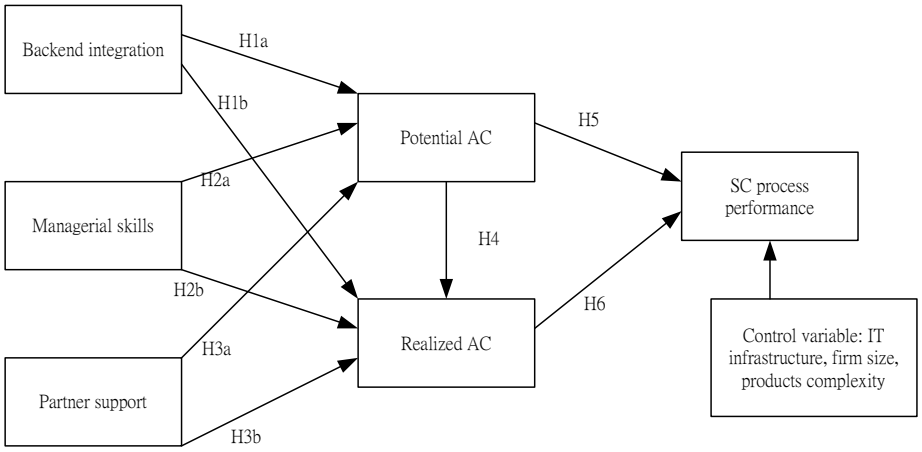

Figure 1. The conceptual model

3.1.2 The independent variables: key resources enabling supply chains

Research on the RBV suggests that the improvement of firm performance through IT deployment depends on the combination of IT infrastructure, integration, relevant skills, and supportive relationships in IT management (Armstrong and Sambamurthy 1999). Based on Wade and Hulland's (2004) typology of IT-related resources, three types of resources may contribute to performance improvements. The first type of resources is inside-out resources that are deployed from inside the firm with a focus on technical platform, skills, and development. Second, outside-in resources leverage external resources and manage external relationships. Finally, spanning resources aim to integrate the firm's inside and outside resources, such as the capability of IT-strategy integration.

Backend integration

Backend integration refers to a firm's ability to link Web applications with back-office databases and to facilitate information sharing along the value chain (Zhu and Kraemer 2005). By connecting separate systems that have common data standards and communication platforms, backend integration provides the "nerve systems" for the supply chain, from which the intensity and speed of a firm's capability of acquiring externally generated knowledge become higher (Malhotra et al. 2005, Zahra and George 2002). Thus, we expect that backend integration positively affects the knowledge acquisition capabilities.

Since backend integration plays an important role in the efficiency and effectiveness of knowledge exchange and serves to reduce the structural and cognitive barriers that impede knowledge sharing (Zahra and George 2002), a firm with higher backend integration tends to comprehend and interpret the information obtained from external sources more easily (Dong et al. 2009, Malhotra et al. 2005). Backend integration also refers to the extent company databases are electronically integrated with those owned by upstream suppliers and downstream partners (Zhu and Kraemer 2005). Such integration reduces the need to reprocess information received from diverse partners. Prespecified formats make a firm easy to interpret and manipulate data, which in turn enhance the assimilation capabilities of the firm. Thus, we propose:

H1a: Backend integration is positively related to potential AC.

The more backend integration, the more likely the Web application are electronically integrated with back-office information systems and databases (Dong et al. 2009). This in turn enables an enterprise to process information collected from its supply chain partners so as to combine existing knowledge and the newly acquired and assimilated knowledge (Malhotra et al. 2005). In addition, with the help of backend integration, the firm can use the Internet to support information sharing along the supply chain (Zhu and Kraemer 2005). This helps the firm compare incoming information with existing insights, replace existing insights. As a result, the generation of new insights by synthesizing information can be expected, leading to better transformation capabilities (Zahra and George 2002).

Backend integration aims to support information sharing along the supply chain, which allows firms to refine, extend, and leverage existing competencies or to create new ones by incorporating acquired and transformed knowledge into its operations, leading to more exploitation capabilities (Dong et al. 2009, Malhotra et al. 2005, Zahra and George 2002). Based on the above arguments, we propose:

H1b: Backend integration is positively related to realized AC.

Managerial skills

As defined earlier, managerial skills represent firms' ability to manage technology-strategy alignment, organizational changes, and process redesign to accommodate the use of IT (Dong et al. 2009). This in turn suggests that managerial skills are related to a firm's ability to acquire expertise critical to managing Internet-based supply chain activities (Zhu and Kraemer 2005). With the help of managerial skills, a firm's structural and cognitive barriers that impede knowledge sharing and exchange can be reduced (Malhotra et al. 2005). In addition, managerial skills enable firms to acquire expertise critical to managing Internet-based supply chain activities (Zhu and Kraemer 2005). All of the above activities related to managerial skills tend to increase firms' acquisition and assimilation capabilities, leading to H2a.

H2a: Managerial skills are positively related to potential AC.

With the help of higher managerial skills, firms are able to manage technology-strategy alignment, organizational change and supply chain restructuring, and process redesign to accommodate the use of IT (Dong et al. 2009, Zhu and Kraemer 2005). Aligning IT with business strategy and managing transformation in processes and structures (Armstrong and Sambamurthy 1999) entails comparing incoming information with existing insights, and providing support for interpreting information based on task characteristics and individual cognitive styles (Malhotra et al. 2005). This is likely to lead to an increase of transformation and exploitation capabilities (Zahra and George 2002). Thus, we propose:

H2b: Managerial skills are positively related to realized AC.

Partner support

Partner support refers to the degree to which supply chain partners have compatible information systems to support inter-firm processes. Better partner support implies that more interoperable ISs and compatible services are available for supply chain partners (Dong et al. 2009, Zhu and Kraemer 2005). This in turn enables an enterprise to process information collected from its supply chain partners, and to perform information sharing and knowledge exchange (Malhotra et al. 2005)—or knowledge acquisition. Further, due to the efficiency and effectiveness of knowledge exchange derived from using compatible ISs among the supply chain partners, the structural and cognitive barriers that impede knowledge assimilation are likely to be reduced to a certain extent (Zahra and George 2002). Thus, we propose:

H3a: Partner support is positively related to potential AC.

With the help of partner support, a firm is able to use not only the resources inside a firm, but also external resources provided by partners along the supply chain (Dong et al. 2009). Firms are more

likely to merge information or replace existing insights, and interpreting information based on the new insights generated by synthesizing information (Alavi and Leidner 2001, Malhotra et al. 2005), leading to more transformation and exploitation capabilities (Zahra and George 2002). Thus, we propose:

H3b: Partner support is positively related to realized AC.

Absorptive capacity and process performance

As defined earlier, potential AC capabilities in terms of acquisition and assimilation capabilities imply that a firm is able to identify and acquire externally generated knowledge that is critical to its operation. In addition, the firm's routines and processes that allow it to analyze, process, and understand the information obtained from external resources (Park et al. 2007, Zahra and George 2002). As suggested by the theory of absorptive capacity (Zahra and George 2002) and empirical evidence (Jansen et al. 2005, Park et al. 2007), potential AC makes the firm receptive to acquiring and assimilating external knowledge, which in turn are likely to facilitate the leverage of the absorbed knowledge, i.e. realized AC.

H4: Potential AC is positively associated related to realized AC.

The relationship between performance and AC can be understood through the lens of transaction cost economics (TCE). As suggested by TCE, a firm's central task is to coordinate transactions efficiently (Williamson 1985). The more potential AC a firm has, indicating the firm's capability of acquiring knowledge and understanding the information obtained from external resources, the more likely the firm can trigger knowledge exchange and sharing that are not easily imitated and thus becomes a source of competitive advantage (Klein and Rai 2009, Malhotra et al. 2005). Further, a firm's potential AC tends to enable the sense of the competitive space, knowing how to perform new roles, the development of new capabilities because of the acquiring of broad ranging and high quality information between partners (Zahra and George 2002). Empirical evidence in support of the positive impact of potential AC on IT usage performance shows that potential AC affects operational efficiency and partner enabled market knowledge creation (Malhotra et al. 2005, Park et al. 2007), leading to higher process performance. Thus, we propose:

H5: Potential AC is positively related to process performance improvement.

The realized AC capabilities of a firm, in terms of transformation and exploitation, imply that the firm is able to develop and refine the routines that facilitate combining existing knowledge. In addition, exploitation capabilities shows that a firm is capable of leveraging competencies or of creating new ones by incorporating acquired and transformed knowledge into its operations (Zahra and George 2002). Studies show that when a firm has more realized AC capabilities, it is more likely that the new knowledge that is created through assimilation can be incorporated into the enterprise's way of doing business and that enables innovation and strategic flexibility (Klein and Rai 2009, Malhotra et al. 2005). This in turn suggests that the firm is able to leverage the information created by supply chain partners and improve coordination of allocated resources across supply chain (Dong et al. 2009, Lee 2002), resulting in better process performance. Thus, we propose:

H6: Realized AC is positively related to process performance improvement.

4 RESEARCH METHODOLOGY

4.1 Data and measures

In an attempt to include only those firms that were mostly likely to have used IT-enabled supply chains, the sample was drawn from the "Chinese cargo automation association" that lists the directory of firms in Taiwan. These firms have used IT to coordinate processes along their supply chains such as upstream procurement and overall information sharing along the supply chain. Senior managers

who have experience in supply chain management (SCM) were chosen as the key informants. According to our interviews with many SCM practitioners, they are the individuals most knowledgeable about every aspect of the SCM activities in their firm.

The identification of the SCM managers was through the help of the firms' chief operating officer (COO). Each COO was sent a letter of solicitation, which includes a brief description of the study, its objective, and a copy of the questionnaire to be completed by the senior managers of SCM. The confidentiality of the responses was assured. A follow-up was conducted two weeks later after the first mailing. In total, 205 questionnaires were received and usable for analysis, showing a 19% response rate, which is typical for similar surveys performed in Taiwan. Table 1 shows the demographic characteristics of the respondents.

Table 1. Demographic characteristics of the responding firms (N= 205)

	Number of firms	Percentage of firms
Sector		
Manufacturing industry	71	34.6%
Information and communication	26	12.7%
Electronics	30	14.6%
Retail/wholesale industry	9	4.4%
Government department	16	7.8%
Metal	7	3.4%
Others	46	22.4%
Number of employees		
Less than 10	13	6.3%
11-50	41	20%
51-100	19	9.3%
101-500	55	26.8%
Over 500	77	37.6%
Age		
21-30	46	22.4%
31-40	117	57.1%
41-	52	20.5%
Gender		
Male	132	64.4%
Female	73	35.6%
The number of PCs in a firm		
<10	13	6.3%
11-30	40	19.5%
31-50	19	9.3%
51-100	29	14.2%
>100	104	50.7%
Infrastructure technologies in place		
EDI and electric funds transfer (EFT)	16	7.8%
Intranet, Extranet, LAN, and WAN	78	38.1%
Data processing capabilities and basic network capabilities	111	54.1%

4.2 Measures

To measure the constructs of the proposed model, this study employed a five-point Likert scale from "extremely disagree (1)" to "extremely agree (5)." For the dependent variable, we measure improvements in process performance with the following subconstructs (Dong et al., 2009; Zhu and

Kraemer, 2005): improvement in upstream operations, improvement in internal operations, and improvement in downstream operations. For the independent variables, many of these measures were designed based on previous studies (Dong et al. 2009, Zhu and Kraemer 2005). Three variables were chosen—backend integration, managerial skills, and partner support. Absorptive capacity (AC) (Zahra and George 2002) was conceptualized as potential AC and realized AC (Jansen et al. 2005). As suggested by prior work (Jansen et al. 2005, Zahra and George 2002), potential AC consists of acquisition and assimilation of new external knowledge.

5 DATA ANALYSIS AND RESULTS

5.1 Analysis methods

Three types of validity were evaluated to ensure the validity of our measurement model: content validity, convergent validity, and discriminant validity. As shown in Table 2, the values of composite reliability ranged from 0.846 to 0.937, which suggest the acceptability of the construct reliability. Concerning the AVE, 0.5 is an acceptable value (Chin 1998, Fornel and Larcker 1981). The AVEs of our measures ranged from 0.625 to 0.882, indicating the acceptability. Finally, we verified the discriminant validity of our instrument by examining the square root of the AVE as commended by Fornel and Larcker (1981). We found evidence in support of the discriminant validity from Table 3—the square root of the AVE for each construct was greater than the levels of correlation involving the construct.

Table 2. Reliability of constructs

Measures	Items	Composite reliability	AVE	Cronbach's alpha
Backend integration	3	0.905	0.760	0.842
Managerial skills	2	0.937	0.882	0.865
Partner support	3	0.846	0.650	0.739
Potential AC	4	0.887	0.667	0.823
Realized AC	5	0.884	0.604	0.835
IT infrastructure	1	1	1	0
Firm size	1	1	1	0
Product complexity	5	0.934	0.738	.0911
SCM process performance	8	0.930	0.625	0.914

Absorptive capacity: AC; Supply chain management: SCM

Table 3. Correlation between constructs

	Mean	S.D	BI	MS	PS	PAC	RAC	SP
Backend integration (BI)	3.294	1.221	**0.872**					
Managerial skills (MS)	3.307	1.003	0.772	**0.939**				
Partner support (PS)	3.011	1.139	0.669	0.69	**0.806**			
Potential AC (PAC)	3.709	0.893	0.368	0.469	0.338	**0.817**		
Realized AC (RAC)	3.337	0.877	0.383	0.448	0.443	0.66	**0.777**	
SCM process performance(SP)	3.824	0.867	0.352	0.365	0.386	0.474	0.388	**0.791**

The bold numbers in the diagonal row are square root of the average variance extracted (AVE).

5.2 Structural model

Because of the acceptable level of validity, the proposed hypotheses were tested by PLS. The results of the PLS analyses were demonstrated in Figure 2 and summarized in Table 4. Most of the hypotheses were supported as expected. As indicated in Figure 2, potential AC (β= 0.448, $p<0.001$)was affected by managerial skills only, accounting for 22.1%. Surprisingly, potential AC was influenced by neither backend integration (β=0.004, p:NS) nor partner support (β=0.026, p:NS). Regarding realized AC, partner support (β=0.240, $p<0.001$) was positively associated with realized

AC as expected, but neither backend integration (β=0.004, p:NS) nor managerial skills (β=0.011, p:NS) exerted positive influence on realized AC. Thus, H2a and H3b were supported as expected, whereas our findings did not support H1a, H1b, H2b, and H3a.

Concerning the influence of AC, potential AC was positively associated with both realized AC (β=0.060, p<0.05) and supply chain process performance (β=0.194, p<0.001). Realized AC had a positive impact on supply chain process performance (β=0.118, p<0.01). The above results demonstrated that H4 to H6 were supported as expected. While supply chain process performance was affected by both potential AC and realized AC, the latter benefited more.

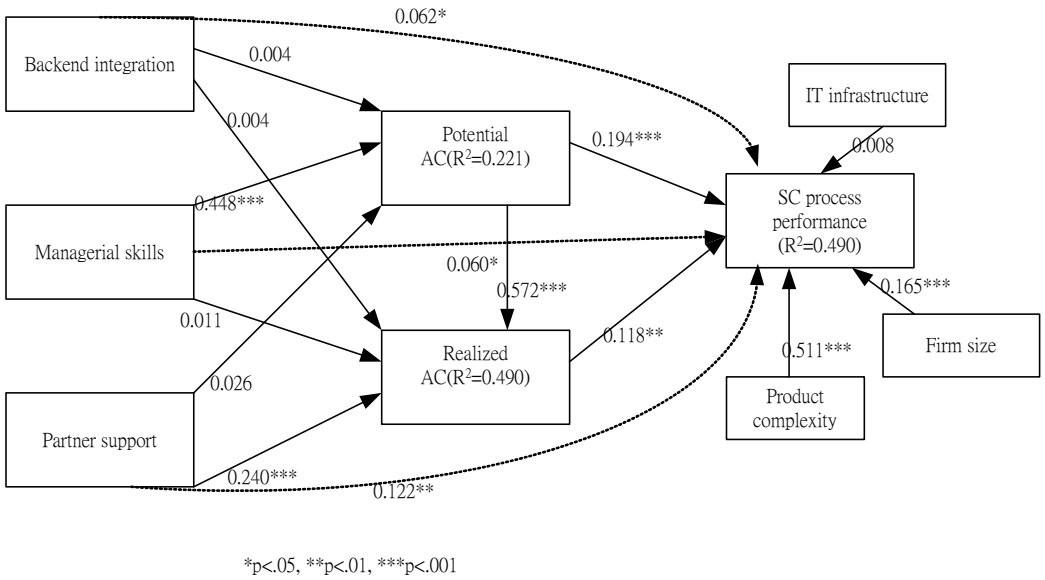

Figure 2. Results of PLS analysis

Table 4. Results of hypothesis testing

Hypothesis	Standardized path coefficient	t-value for path	Results
H1a: backend integration→ potential AC	0.004	0.058	Not supported
H1b: backend integration → realized AC	0.004	0.065	Not supported
H2a: managerial skills → potential AC	0.448***	4.018	Supported
H2b: managerial skills → realized AC	0.011	0.165	Not supported
H3a: partner support → potential AC	0.026	0.394	Not supported
H3b: partner support → realized AC	0.240***	2.631	Supported
H4: potential AC → realized AC	0.572***	10.578	Supported
H5: potential AC → process performance improvement	0.194***	3.183	Supported
H6: realized AC → process performance improvement	0.118**	2.103	Supported

*p<.05. **p<.01, ***p<.001

6 DISCUSSION, IMPLICATIONS, AND LIMITATIONS

Our study provides valuable insight into the process level performance of supply chain. This is the first empirical study, to the best of our knowledge, which provides a workable solution to supply chain performance, particularly emphasizing how performance is affected by both digitally enabled SCM and absorptive capacity. While our model was based on Dong et al's (2009) research, including the variables related to digitally enabled SCM, we proposed an alternative way of improving process performance, i.e. leveraging both the IT-enabled resources and strategic knowledge creation. In other words, we contended that the process performance of SC is affected not only by the IT-enabled resources in terms of backend integration, managerial skills (Dong et al. 2009), and partner support, but also by the absorptive capacity of a firm (Zhara and George 2002). In addition, the absorptive capacity, in terms of potential AC and realized AC, is affected by the resource synergy of IT. Two partially mediating effects were found; potential AC partially mediates the relationship between

managerial skills and performance, and the relationship between partner support and SC performance was partially mediated by realized AC.

From Figure 2, synthesizing IT-related resources can create value in supply chain context. Specifically, the value is generated through three different but complementary aspects. Backend integration and partner support aim to gain tangible benefits such as supporting information sharing along the supply chain (Klein and Rai 2009, Zhu and Kraemer 2005), while managerial skills focus on yielding intangible benefits, including increasing firms' market value (Brynjolfsson et al. 2002).

Our findings confirm that both backend integration and partner support serve as critical resources, from which process-level performance can be increased. In particular, the value is generated through two aspects. Information exchange and sharing are facilitated by the compatible systems (or partner supports) that support Internet-based value chain activities such as online orders. On the other hand, backend integration implies the effective use of IT to improve upstream, downstream, and internal operations. Our findings support the RBV theory that IT value creation stems from both the compatibility of the interorganizaitonal IS (i.e. partner support) and the efficient information flows in supply chains (i.e. backend integration) (Lee 2002).

In addition to the tangible benefits derived from backend integration and partner support, the SC process performance is also affected by the managerial skills that aim to provide intangible benefits. As suggested by prior studies (Brynjolfsson et al. 2002, Dong et al. 2009), managerial skills aim to manage the coevolutionary changes from technology, processes, and strategies in digitized SCM. Overall, our findings suggest that SC process performance is fostered by the compatibility of the IS (i.e. partner support), the integration of the SC-related application (backend integration), and the technology-strategy alignment to manage the use of IT and SC activities.

Limitations and future research

This study has a number of limitations. First, although cases in Taiwan provide a good opportunity for testing the implications of values derived from IT-enabled resources and knowledge creation capabilities, our findings may not be applied to firms with different culture. Future study may consider the impact of culture on the proposed model. Second, three variables related to IT resources and two dimensions of organizational capabilities (i.e. potential and realized AC) are considered critical to SC performance, but other factors such as relational governance of SC partners may also affect SC performance. Third, care has been taken to identify the senior SC managers as the key informants of the survey. However, relying on the self-report of the single informant may lead to perceptual and common method biases, which can not be completely screened and eliminated via statistical means. Finally, cross-sectional surveys have the usual limitation of substantiating affirmative causality. Future study may emphasize process-oriented research design based on theories invoking dynamic capabilities and resource-based perspectives. Drawing from these perspectives, managers may better understand the alignment between the use of IT in the contexts of supply chain and a firm's dynamic capabilities, and their roles in enhancing SC process performance.

7 CONCLUSIONS

How to leverage the IT-related resources in the context of supply chains becomes an emerging issue that attracts interest and provokes debate by academics and practitioners. Extending Dong et al's (2009) study, this research delineates the relationship among the value of IT-enabled supply chain, absorptive capacity, and process performance in the context of supply chains. While our study is related to Dong et al. (2009), the present work includes two new constructs (i.e. potential AC and realized AC), and addresses how the IT-related resources affect the above AC, and how ACs mediate the relationships between these resources and process performance. This study contributes to the literature on SCM by developing a model which specifies how SC performance can be facilitated by leveraging the resources in supply chain contexts, including the benefits derived from integrational, managerial, relational, relational and knowledge creation resources.

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